

Madigan Army Medical Center Referral Guidelines

Cervical Disk Syndrome

Diagnosis/Definition

A condition of radicular arm pain, sometimes accompanied by neck pain and may be accompanied by motor or sensory deficits in the upper and/or lower extremities.

Initial Diagnosis and Management

The initial diagnosis is clinical with acute or subacute development of radicular arm pain (brachialgia) with or without posterior cervical pain (cervicalgia) , following minimal neck trauma.

- In patients under the age of 50, no x-ray or lab studies are necessary.
 - Do not prescribe muscle relaxants as they are not effective.
 - Over the age of 50, disc abnormalities are possible, but initial c-spine series should be considered which might exclude bony structural abnormalities such as severe degenerative changes, osteoporosis with compression, or metastatic involvement.
 - “Red Flags” include fevers, chills, history of cancer, immunodeficiency, or recent trauma
 - Patients, especially older patients, should be carefully screened for symptoms or signs of cervical myelopathy (spasticity, alterations in gait and upper extremity coordination, hyperreflexia).
- MRI and/or CT scan are not necessary to confirm the initial diagnosis of cervical disc syndrome except when there is failure to respond after 4 to 6 weeks of conservative therapy; there are “red flags” present; or there is worsening of neurologic deficits (weakness, loss of reflexes, or atrophy). (see Indications for Specialty Care Referral).
 - Conservative therapy is defined as limited bed-rest (less than 72 hours), reduction of overall activity level for 2 weeks with a trial of nonsteroidal anti-inflammatory medications, steroid taper for radiculopathy, narcotic analgesia as necessary and muscle relaxants. Referral to Physical Therapy can be made to supplement treatment during 4 to 6 weeks of conservative therapy.

Ongoing Management and Objectives

- During the acute period the major consideration is that the cervicalgia/brachialgia is decreasing and overall mobility is increasing. Conservative therapy as described above is indicated.

Indications for Specialty Care Referral

- A. Failure to respond to 6 weeks of conservative therapy, which includes APPROPRIATE^{1,2} physical therapy.

- B. Worsening of radiculopathy during adequate conservative therapy.
 - C. Neurologic worsening including motor weakness, loss of reflexes, and atrophy.
 - D. Evidence of cervical myelopathy (spasticity, alterations of gait, incoordination of upper extremities, hyperreflexia, and pathologic reflexes).
- **Condition A** indicates a routine referral; however, a diagnostic study (MRI) should be obtained at this time by the primary care provider or at MAMC. If patient has cervicalgia without radiculopathy (muscle weakness, loss of reflexes, or atrophy), the patient should be referred to Physical Medicine and Rehabilitation for continuation of nonsurgical treatment modalities. If patient has cervical radiculopathy with supportive abnormal MRI findings, the patient should be referred to either Neurosurgery or Orthopedics for surgical evaluation. In addition, a consult should be placed to Anesthesia Pain Service for consideration of epidural steroids.
 - Patients with disabling neck pain without radiculopathy unresponsive to prolonged conservative management with MRI evidence of disc degeneration limited to 1 or 2 levels may be referred to Orthopedics only if the patient is amenable to a discussion of surgical options. Patients with greater than 2 abnormal disc levels and axial neck pain are unlikely to benefit from surgical consultation.
 - **Conditions B , C, and D** often indicates urgency. If the patient's MRI demonstrates supporting findings, then referral to Neurosurgery or Orthopedics is appropriate. If the patient's MRI does not support the clinical findings, the patient should be referred to Neurology for evaluation and neurodiagnostics
- An MRI should be ordered to rule out cervical myelopathy WHEN it is suspected from findings on the clinical exam (this is important – the clinical exam findings should be the strongest precursory decision tool for ordering imaging). MRI correlates strongly with the clinical exam, which should not be underestimated.³ Diagnostic properties for identifying associated abnormalities on MRI including space-occupying neoplasms, disc herniation, and ligamentous ossification:
 - Sensitivity of MRI (79%–95%)
 - Specificity (82%–88%)
 - Positive likelihood ratio_4.39–7.92
 - Negative likelihood ratio_0.06–0.27

Criteria for Return to Primary Care

- Surgery is not presently indicated and a reasonable course of conservative therapy is defined which can be followed at primary care level.
- Surgery has been performed, condition resolved, and usual post-op follow-up is completed.

References

1. Raney NH, Petersen EJ, Smith TA, et al. Development of a clinical prediction rule to identify patients with neck pain likely to benefit from cervical traction and exercise. *European spine journal* : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society 2009;18:382-91.
2. Walker MJ, Boyles RE, Young BA, et al. The effectiveness of manual physical therapy and exercise for mechanical neck pain: a randomized clinical trial. *Spine* 2008;33:2371-8.
3. Harrop JS, Naroji S, Maltenfort M, et al. Cervical Myelopathy: A Clinical and Radiographic Evaluation and Correlation to Cervical Spondylotic Myelopathy. *Spine* 2010

Last Review for this Guideline: **November 2011**
Referral Guidelines require review every three years.

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